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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/143,318	08/28/1998	TAKASHI YAMANAKA	S004-3484	3378

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/143,318

Applicant(s)

YAMANAKA ET AL.

Examiner

Mark Budd

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-21 is/are rejected.
- 7) ☒ Claim(s) 11 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The following action is a result of carefully considering the position of the Board of Appeals as stated in the first new paragraph beginning on page 8 of the Decision dated 5-21-04.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 13 is rejected under 35 U.S.C. 102(a) as being anticipated by Miyazawa figs. 1 and 44 as well as the text at col. 10, lines 28-44; col. 12, lines 36-46 and col. 18, line 54- col. 20 line 68. Fig. 1 and columns 10 and 12 teach that the electrical circuit of the ultrasonic motor can be a self-oscillating type using feedback from the piezo element to sustain vibrations. Figure 44 shows the motor construction comprising an oscillating member #2-27, a conductive support element #4-27, a piezoelectric element #3-27, a moving body #1-27, a pressing mechanism #9-27 and "at least one component of the ultrasonic motor --- is formed with an insulating surface ---". #46 or #47.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7, 8, 10, 14-17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa in view of Sumihara.

As noted above, Miyazawa teaches the basic self-oscillating ultrasonic motor. Miyazawa uses conductive materials for the vibrating member, pressing member and moveable member. Sumihara (see abstract) teaches making at least the moveable member out of fiber reinforced resin material so that the moving body can be lighter in weight and easier to manufacture, as well as provide uniform contact and therefore less wear on the rotor/stator interface.

Thus, for at least these reasons, it would have been obvious to one of ordinary skill in the art to provide Miyazawa with a fiber reinforced resin moveable member (rotor).

Claims 5, 6, 7, 18, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazawa in view of Sumihara as applied to claim 1 above, and further in view of Sawayama.

These claims add that a wear resistant surface is provided on the stator surface. Sawayama teaches either the rotor or stator can have an aluminum oxide surface layer to prevent unwanted wear. (col. 3, lines 50-58, Table 1, Table 2 and col. 7, lines 49-54). Thus for at least this reason it would have been obvious to one of ordinary skill in the art to provide a wear layer of, e.g. alumina, to Miyazawa as modified by Sumihara.

Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Further, cited of interest are Okuno, Tokusima, Shirasaki and Saya each of which teaches suitable ultrasonic motor materials.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark O. Budd whose telephone number is (703)308-3929. The examiner can normally be reached on (571)272-2019 from 6am to 4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Budd/ds

09/09/04


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MARK O. BUDD
PRIMARY EXAMINER
ART UNIT 2834